HASTINGS
Technology Metals Limited

31 October 2019

13% INCREASE IN MEASURED AND INDICATED MINERAL RESOURCES

- **Updated Multi Indicator Kriged (MIK) Mineral Resource estimate has resulted in an uplift to the Mineral Resource classifications of the current economic deposits.**
- **Combined Measured and Indicated Mineral Resources increased by 13% or 1.7Mt to 15.1Mt.**
- **Increase in Total Rare Earths Oxide (TREO) of 8,200t or 5% to 171Kt in the Measured and Indicated Mineral Resource Categories.**
- **Increase in Neodymium and Praseodymium Oxide (Nd_2O_3+Pr_6O_{11}) of 4,000t or 7% to 59Kt in the Measured and Indicated Mineral Resource Categories.**
- **Inferred Mineral Resources decreased by 25% or 2.1Mt to 6.2Mt**
- **Nd_2O_3+Pr_6O_{11} Global Grade decreased 0.01% to 0.38%.**
- **Global Mineral Resource is now 21.3Mt @ 1.12% TREO and 0.38% Nd_2O_3+Pr_6O_{11}.**

Introduction

The Directors of Hastings Technology Metals Limited (ASX: HAS) are pleased to announce a 13% increase in Measured plus Indicated Mineral Resources (for those deposits forming the basis of the Definitive Feasibility released in November 2017) compared to the most recently announced Mineral Resource estimate in November 2018 (ASX announcement titled "INCREASE IN MEASURED AND INDICATED RESOURCES AT YANGIBANA PROJECT" 28 November 2018). Measured plus Indicated Mineral Resources now stand at 15.1Mt within a total Mineral Resource of 21.3Mt. The total updated Measured and Indicated Mineral Resource now hosts approximately 60Kt of neodymium and praseodymium oxide, an increase of 7%, which forms the basis of the Company's main economic driver.

Charles Lew, Hastings Executive Chairman, said *"we are extremely pleased that this work has not only confirmed our existing Mineral Resources but has significantly increased the Measured and Indicated portions which drive Mining Reserves. We are confident that the expected increase in Ore Reserve will extend the mine life which underpins the project financing."*

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Summary of Mineral Resource Changes

The total Mineral Resources as at October 2019 are shown in Table 1. The new Mineral Resources are based on the re-estimated and updated deposits as listed in Table 2 plus the previously announced deposits listed in Table 4 which have not been changed since the last Mineral Resource announcement dated 28 November 2018.

Reporting of the following Minerals Resources, for all deposits, is at 0.2% Nd_2O_3+Pr_6O_{11}

Table 1: Total JORC (2012) Mineral Resources October 2019

Category	M* Tonnes	%TREO	%Nd_2O_3+Pr_6O_{11}
Measured	4.15	1.15	0.43
Indicated	10.92	1.13	0.38
sub-total	***15.07***	***1.13***	***0.39***
Inferred	6.18	1.09	0.35
TOTAL	***21.25***	***1.12***	***0.38***

- *Denotes million; numbers may not add up due to rounding. Includes JV tenement contributions.*

Compared to the previously announced Mineral Resource in November 2018;

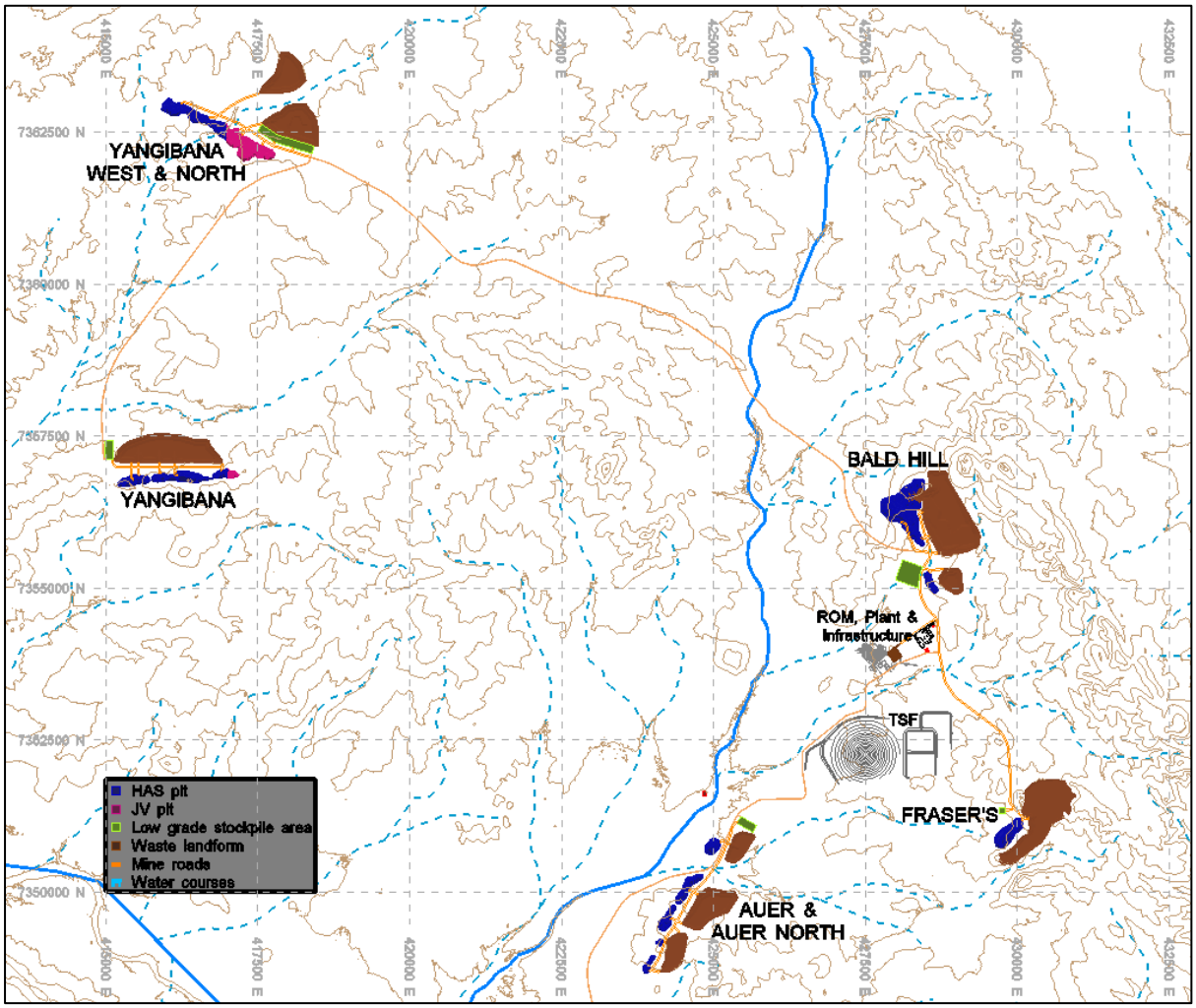
- Measured and Indicated Tonnes increased by 13% or 1.7Mt
- Measured and Indicated Nd_2O_3+Pr_6O_{11} tonnes increased by 7% or 4,000t
- Inferred Tonnes decreased by 25% or 2.1Mt
- Measured and Indicated Nd_2O_3+Pr_6O_{11} grade decreased 0.03% to 0.39%
- Total Mineral Resource Tonnes decreased by 2% to 21.25Mt
- Total TREO Grade decreased by 4% to 1.12%

A Mineral Resource re-estimation was instigated as part of the financial due diligence process currently being completed by Hastings. This audit check and validation process was completed on only those deposits which form the basis of the economic analysis included in the Definitive Feasibility Study released in November 2017, as per Table 2 below.

Table 2: Summary of Deposits Re-estimated forming new Mineral Resource

Deposit	Comments
Bald Hill	Re-estimated
Frasers	Re-estimated
Yangibana	Re-estimated
Yangibana North	Re-estimated
Auer	Re-estimated

Figure 3 - Yangibana Project Layout Plan showing location of re-estimated Mineral Resources



The work undertaken to re-estimate the deposits was completed by Gill Lane Consulting and incorporates all of the information and data that was used in the previous Mineral Resource estimate announced on 28 November 2018. No new data was used in the re-estimation process.

Table 4 represents a list of deposits where no activity or re-estimation of Mineral Resources was completed. These deposits remain unaltered as per the Mineral Resource announcement dated 28 November 2018.

Table 4: Summary of Deposits unaltered and unchanged forming new Mineral Resource

Deposit	Comments
Simon's Find	Not Re-estimated
Gossan	Not Re-estimated
Lion's Ear	Not Re-estimated
Hook	Not Re-estimated
Kane's Gossan	Not Re-estimated

The work completed on the unaltered deposits was completed by Lynn Widenbar and Associates incorporating all the information and data as per the previous Mineral Resource announcement from 28 November 2018.

Geology

The near surface mineralisation throughout the Yangibana Project is hosted by iron oxides and hydroxides termed ironstone, being the alteration products of the primary hosts ferro-carbonatite and phoscorite intrusive veins. The main rare earths-bearing mineral is monazite which has locally undergone alteration at shallow depths (to 25m depth) to its hydrous equivalent rhabdophane and to rare earths-bearing aluminium-phosphates such as florencite.

The deposits occur as narrow but strike extensive veins that have a range of dips from almost horizontal (10-20^{o}) to sub-vertical. The Fraser's deposit has the most extreme range from 5^{o} in portions towards its north-eastern end to 65^{o} at its southwestern end. Average true thickness varies from 2.2m to 3.5m throughout the Yangibana deposits although locally true thicknesses in excess of 20m occur.

Drilling

Hastings has completed eight drilling programmes comprising both reverse circulation (RC) and diamond drilling totalling more than 1,500 holes for 80,000m. Of these 127 holes for 7,485m are diamond holes.

Holes were initially drilled at 50m spacings along strike and down dip. Infill drilling in areas with Mineral Resource potential has been undertaken at 37.5m, or less, spacing.

Most drillholes were vertical, subject to access availability, with holes into the steeper mineralised zones (Auer, Auer North, the southeastern portion of Fraser's) being at -60^{O} or -70^{O}. Internal surveys were carried out at 30m intervals downhole by the drilling contractors using a Reflex electronic single-shot camera within a stainless-steel drill rod.

Collar surveys were carried out by the Company using a Trimble RTX R1 GNSS receiver, with accuracies of approximately 50cm. The high-resolution Digital terrain Model commissioned by the Company has been used as the topographic control for all drillholes. A Relative Level (RL) was assigned to each drillhole collar based on the high-resolution DTM using Mapinfo Discover 3D.

RC holes have been drilled using a nominal 5¼ inch diameter face-sampling bit. Samples have been collected through a built-in cyclone with a triple-tier riffle-splitting system providing a large sample of approximately 25kg and a sub-sample of 2-4kg of which selected samples were sent for analysis, from each metre drilled. Field duplicates, blanks and Reference Standards were inserted at a rate of approximately 1 in 20.

Diamond core has been drilled at HQ size. The core is logged, and prospective zones are sawn into half and one half is then quartered with one quarter sent for analysis. Assayed intervals are based on geology with a minimum length of 0.2m.

Sampling

Samples were routinely sent to Genalysis in Perth for analysis using techniques considered appropriate for the style of mineralisation. Samples were analysed for the range of rare earths, rare metals (Nb, Ta, Zr), thorium and uranium and a range of common rock-forming elements (Al, Ca, Fe, Mg, Mn, P, S, Si, Sr). Duplicate samples have been sent to SGS Laboratories for cross-checking.

Once assay data were returned, the elemental values were converted to oxides using standard factors.

Quality Control

In total, the quality control regime executed has provided reasonable support for the accuracy and precision of the assay results underpinning the mineral resource estimate. The vast majority of results for standards remain within the normal control limits of 2 standard deviations. One standard GRE-01 that failed 11 out of the 50 certifying analyses suggested either an issue with the standard itself or that one of the certifying analytical methods was inappropriate for the material.

Bulk density has been completed by either the Company or at independent laboratories on core from each of the main deposits. Samples from each of the oxidised, partially oxidised, and fresh mineralisation zones have been tested with results feeding into the Mineral Resource estimations based on weathering surfaces as defined by the Company.

A review of the bulk densities showed variations in density in line with the type of mineralisation that was encountered in the diamond drilling.

Interpretation of Geology - Wireframing

Each of the five (5) re-modelled deposits was assessed for grade and geological continuity and the mineralised wireframes were defined around a combination of TREO grades and, where TREO grades were low and mineralisation continuity was believed to exist, Fe grades were used as a substitution for mineralisation.

The drilling data was limited to selected assay intervals with large sections of the drilling unsampled in areas where no mineralisation was believed to exist. Within the Mineral Resource estimation data set the unsampled zones within the drilling were replaced with zero values. In a limited number of instances, for geological consistency, the mineralised envelopes were carried through areas within drill holes that had not been sampled. In these

cases, the minimum thickness of intercept was assumed to be 2m and, in common with the rest of the drilling, these intervals were assumed to be at zero grade.

In a limited number of cases where the assay values did not meet the TREO cut-off grade criteria for wireframing assessment of the mineralisation was undertaken using elevated Fe values. This was done to enable a consistent mineralised envelope with the low TREO (and other element) values incorporated. In general, these areas are of limited extent.

Cut-Off Grades

Following the review of the original Yangibana mineral resource estimates, based on an elevated $Nd_2O_3+Pr_6O_{11}$ 0.2% cut off, a decision was taken to re-wireframe all of the deposits that contained Ore Reserves using a TREO cut-off grade in order to improve the geological and grade consistency of the modelled wireframes. In this instance a TREO grade of approximately 0.18% was chosen for the wireframing value as this was considered to represent the transition between consistently mineralised and non-mineralised material. In cases where a lower grade was adjacent to significantly higher grades the lower grade interval was incorporated into the wireframe as these were constructed around the final 1m composites rather than the original selective sampling.

This process created a level of conservatism whereby lower grades of $Nd_2O_3+Pr_6O_{11}$ were incorporated into the wireframe than was previously the case. Additional conservatism was added by only allowing the wireframes to be extrapolated down dip below the last drill hole, using the geological convention of 50% of the local drill hole spacing. The effect of this can be seen in Figures 4-7.

This interpretation differed from the previous Mineral Resource estimate which was undertaken using a sectional interpretation combining logged geology and a nominal 0.2%$Nd_2O_3+Pr_6O_{11}$ cut-off to define the mineralisation envelope.

Figure 5: Wireframing results of the Bald Hill Deposit, with outline of 2018 limits

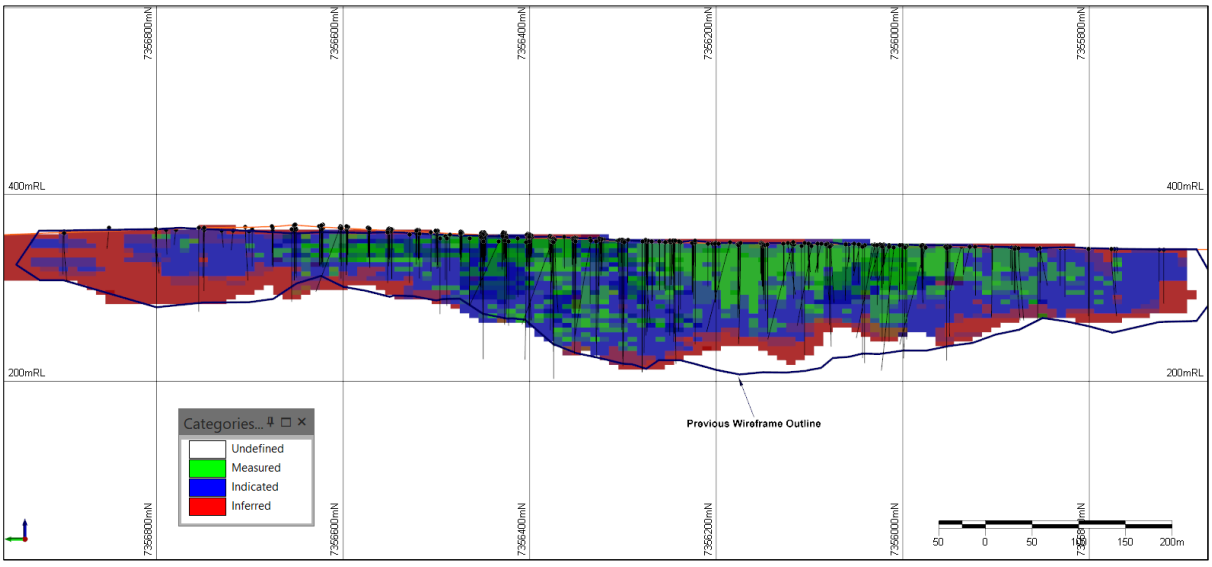


Figure 6: Wireframing results of the Frasers Deposit, with outline of 2018 limits

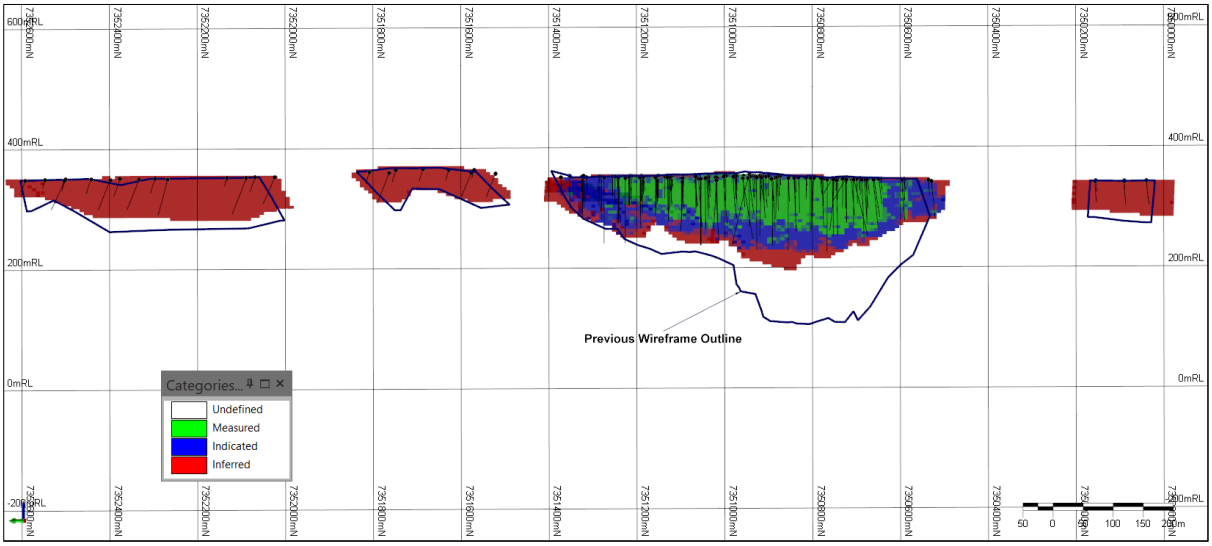


Figure 7: Wireframing results of the Yangibana North Deposit, with outline of 2018 limits

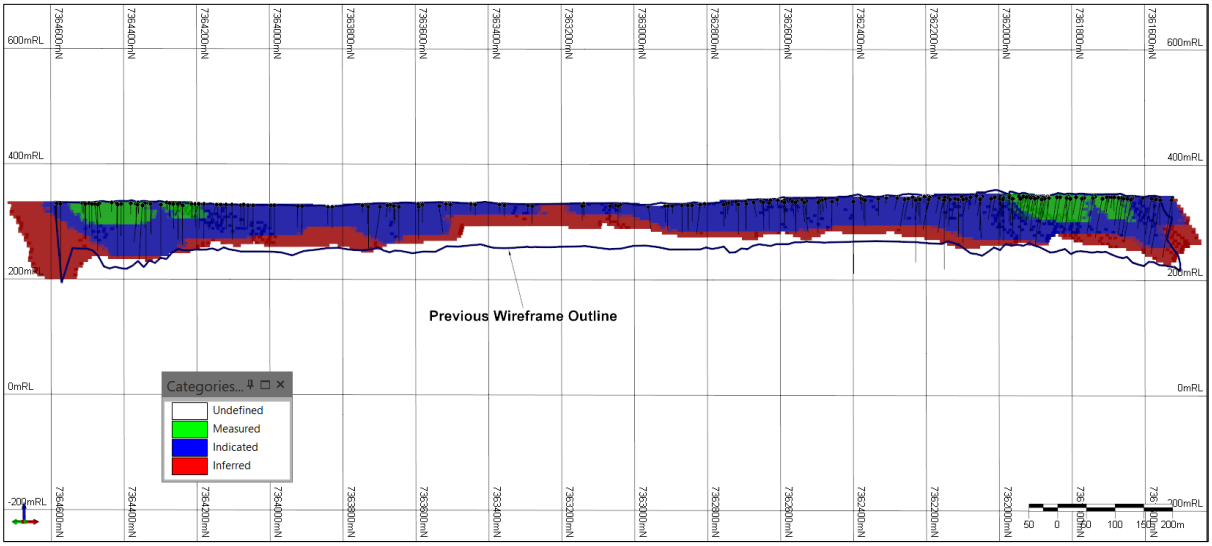


Figure 8: Wireframing results of the Yangibana Deposit, with outline of 2018 limits

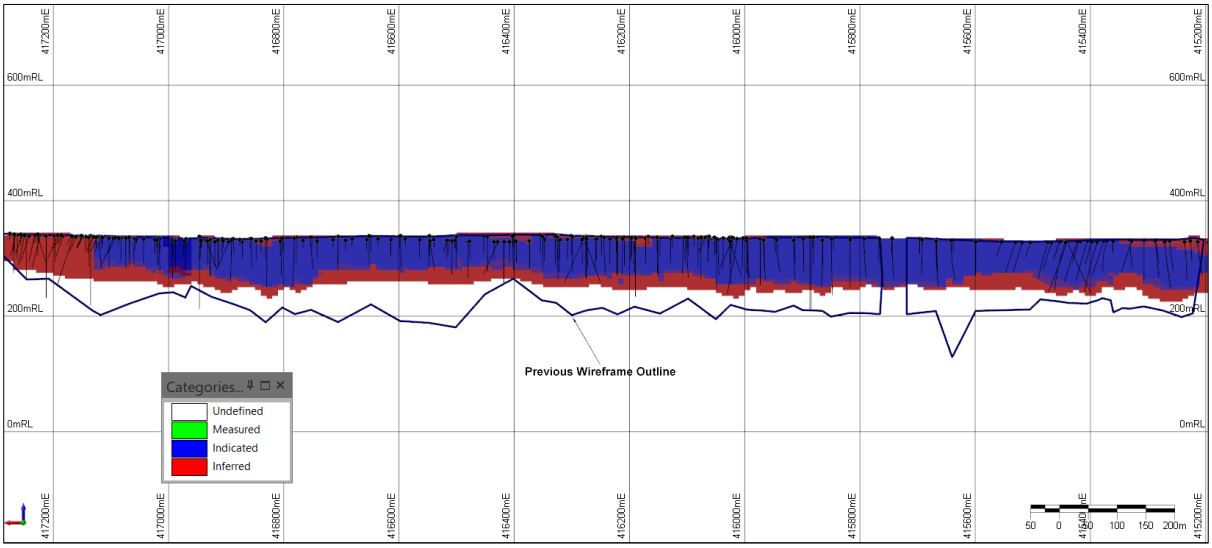
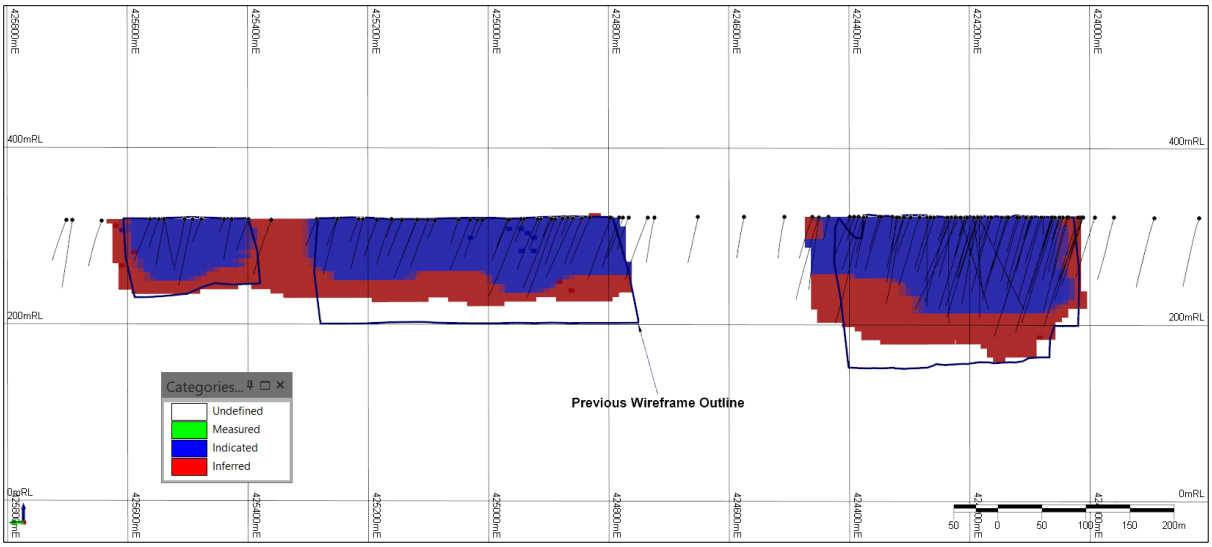


Figure 9: Wireframing results of the Auer Deposit, with outline of 2018 limits



Block Modelling Parameters – re-estimated Resources only

Due to the complexity and generally narrow nature of the mineralisation a 'third party' geological domain was inserted into the MIK modelling process such that the resulting mineralised domain proportions closely match those of the underlying wireframes. One metre down hole compositing based on the assay data was used to regularise the assayed intervals. Summary statistics for each deposit were used to identify the presence of outliers. As the estimated are based around MIK methodologies no grade top-cutting is performed in the estimation process.

For each deposit, variograms of the primary elements were defined and used in the mineral resource estimate. In all instances the directional trends evident in the variogram maps are evident to some extent in plan views of the sample data, and they normally conform to the orientation of the mineralisation within the wireframes. As expected, variogram model

ranges in the vertical direction are relatively short due to the predominantly thin nature of the mineralisation. The majority of variograms display reasonable structure, with anisotropies reflecting those observed in the variogram maps.

All re-estimated mineral resources were created with the same panel size of 10m x 10m x 5m. This size was chosen as a compromise between the average drill spacing (up to 40m x 40m in some areas), size of the mineralisation wireframes (in order to limit resulting low mineralised proportions), orientation of mineralisation (ideally the panels would have been orientated with the mineralisation however this results in a model that is unusable for pit optimisation purposes) and the models' ultimate use for mine planning.

The Mineral Resources have been classified in the Measured, Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC) by the Competent Person. A range of criteria has been considered in determining the classification including geological and grade continuity, data quality, drill hole spacing, and modelling technique and kriging output parameters.

As a general rule, the following spacings characterise the Mineral Resource classification.

- Infill drilling between 20m by 20m and 35m by 35m – Measured Category
- Drill spacing 50m by 50m – Indicated Category
- Drill spacing 100m by 50m to 100m by 100m – Inferred Category

Re-Estimated JORC 2012) Mineral Resources – by Deposit

The following Figures represent those deposits which have been re-estimated and updated from those previously announced in November 2018. Numbers may not add up due to rounding.

Table 10: Bald Hill Re-Estimated Mineral Resource, 100% Hastings

Bald Hill	M Tonnes	%TREO	%Nd_2O_3+Pr_6O_{11}
Measured	2.94	1.00	0.40
Indicated	2.53	0.96	0.38
Inferred	0.82	0.79	0.31
TOTAL	***6.29***	***0.96***	***0.38***

Table 11: Frasers Re-Estimated Mineral Resource, 100% Hastings

Frasers	M Tonnes	%TREO	%Nd_2O_3+Pr_6O_{11}
Measured	0.55	1.66	0.69
Indicated	0.37	1.32	0.55
Inferred	0.39	0.95	0.38
TOTAL	***1.32***	***1.35***	***0.56***

Table 12: Auer Re-Estimated Mineral Resource, 100% Hastings

Auer	M Tonnes	%TREO	%$Nd_2O_3+Pr_6O_{11}$
Indicated	1.87	1.00	0.35
Inferred	0.90	1.01	0.35
TOTAL	***2.76***	***1.00***	***0.35***

Table 13: Yangibana Re-Estimated Mineral Resource, Total

Yangibana	M Tonnes	%TREO	%$Nd_2O_3+Pr_6O_{11}$
Indicated	1.53	0.90	0.43
Inferred	0.42	0.80	0.39
TOTAL	***1.95***	***0.88***	***0.42***

Yangibana M09/165 100% Hastings

Indicated	1.42	0.91	0.43
Inferred	0.36	0.79	0.38
TOTAL	***1.78***	***0.89***	***0.42***

Yangibana M09/163 (JV Tenement 70% of Total to Hastings)

Indicated	0.11	0.78	0.39
Inferred	0.05	0.85	0.42
TOTAL	***0.16***	***0.80***	***0.40***

Table 14: Yangibana North Re-Estimated Mineral Resource, Total

Yangibana North	M Tonnes	%TREO	%$Nd_2O_3+Pr_6O_{11}$
Measured	0.66	1.39	0.36
Indicated	4.15	1.41	0.36
Inferred	0.97	1.43	0.37
TOTAL	***5.78***	***1.41***	***0.36***

Yangibana North M09/160 100% Hastings

Measured	0.29	1.35	0.35
Indicated	1.66	1.43	0.37
Inferred	0.60	1.43	0.37
TOTAL	**2.55**	***1.42***	***0.37***

Yangibana North M09/159 (JV Tenement 70% of Total to Hastings)

Measured	0.38	1.42	0.36
Indicated	2.49	1.40	0.36
Inferred	0.37	1.45	0.37
TOTAL	***3.24***	***1.41***	***0.36***

JORC (2012) Mineral Resources, not updated in this announcement– by Deposit

The following Tables represent those deposits which have not been updated or altered since the 28 November 2018 Minerals Resource announcement. Numbers may not add due to rounding errors.

Table 15: Simon's Find Mineral Resource, 100% Hastings

Simons Find	M Tonnes	%TREO	%$Nd_2O_3+Pr_6O_{11}$
Indicated	0.45	0.64	0.35
Inferred	0.86	0.67	0.35
TOTAL	***1.31***	***0.66***	***0.35***

Table 16: Mineral Resources not updated, 100% Hastings, all Mineral Resources are Inferred Only

Inferred	Tonnes	%TREO	%$Nd_2O_3+Pr_6O_{11}$
Gossan	0.25	1.43	0.35
Lion's Ear	0.71	1.54	0.39
Hook	0.29	1.52	0.33
Kane's Gossan	0.57	1.04	0.29
TOTAL	***1.82***	***1.36***	***0.34***

Competent Person Statements

The information in this announcement that relates to Mineral Resources is based on information compiled by David Princep and Lynn Widenbar. Both Mr Princep and Mr Widenbar are independent consultants to the Company and members of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Princep and Mr Widenbar have sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code"). Consent by Mr Widenbar to include statements in this announcement have been provided in previous announcements entitled "Increase in Measured and Indicated Resources at Yangibana Project" dated 28 November 2018.

TERMINOLOGY USED IN THIS REPORT

Total Rare Earths Oxides, TREO, is the sum of the oxides of the light rare earth elements lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), and samarium (Sm) and the heavy rare earth elements europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu), and yttrium (Y).

About Hastings Technology Metals Limited

Yangibana Project

Hastings Technology Metals Limited (ASX:HAS, Hastings or the Company) is advancing its Yangibana Rare Earths Project in the Upper Gascoyne Region of Western Australia towards production. The proposed beneficiation and hydro metallurgy processing plant will treat rare earths deposits, predominantly monazite, hosting high neodymium and praseodymium contents to produce a mixed rare earths carbonate that will be further refined into individual rare earth oxides at processing plants overseas.

Neodymium and praseodymium are vital components in the manufacture of permanent magnets which is used in a wide and expanding range of advanced and high-tech products including electric vehicles, wind turbines, robotics, medical applications and others. Hastings aims to become the next significant producer of neodymium and praseodymium outside of China.

Hastings holds 100% interest in the most significant deposits within the overall project, and 70% interest in additional deposits that will be developed at a later date, all held under Mining Leases. Numerous prospects have been identified warranting detailed exploration to further extend the life of the project.

Brockman Project

The Brockman deposit, near Halls Creek in Western Australia, contains JORC Indicated and Inferred Mineral Resources, estimated using the guidelines of JORC Code (2012 Edition).

The Company is also progressing a Mining Lease application over the Brockman Rare Earths and Rare Metals Project.

Hastings aims to capitalise on the strong demand for critical rare earths created by the expanding demand for new technology products.

For further information on the Company and its projects visit www.hastingstechmetals.com

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JORC Code, 2012 Edition – Yangibana project deposits 2019

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• Samples used to assess the numerous deposits of the Yangibana Project have been derived from both reverse circulation (RC) and diamond drilling. Eight drilling programmes have been completed to date with more than 1,500 holes drilled for 80,000m. • Samples from each metre were collected in a cyclone and split using a 3-level riffle splitter. Field duplicates, blanks and Reference Standards were inserted at a rate of approximately 1 in 20. • RC and diamond drilling leading to the establishment of JORC Resources has been carried out at Bald Hill, Frasers's, Yangibana West, Auer, Auer North, and Yangibana, within tenements held 100% by Hastings, and at Yangibana North in tenements in which Hastings has a 70% interest.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• Reverse Circulation drilling at the various targets utilised a nominal 5 1/4 inch diameter face-sampling hammer. • Diamond drilling at various targets has been NQ and HQ diameter.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Recoveries are recorded by the geologist in the field at the time of drilling/logging. • If poor sample recovery is encountered during drilling, the geologist and driller have endeavoured to rectify the problem to ensure maximum sample recovery. Visual assessment is made for moisture and contamination. A cyclone and splitter were used to

Criteria	JORC Code explanation	Commentary
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	ensure representative samples and were routinely cleaned. • Sample recoveries to date have generally been reasonable, and moisture in samples minimal. Insufficient data is available at present to determine if a relationship exists between recovery and grade.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	• All drill chip samples are geologically logged at 1m intervals from surface to the bottom of each individual hole to a level that supports appropriate future Mineral Resource studies. • Logging is considered to be semi-quantitative given the nature of reverse circulation drill chips. • All RC drill holes in the previous programme were logged in full.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	• The RC drilling rig is equipped with an in-built cyclone and triple tier riffle splitting system, which provided one bulk sample of approximately 25kg, and a sub-sample of 2-4kg per metre drilled. • All samples were split using the system described above to maximise and maintain consistent representivity. Most samples were dry. For wet samples the cleanliness of the cyclone and splitter was constantly monitored by the geologist and maintained to avoid contamination. • Bulk samples were placed in green plastic bags, with the sub-samples collected placed in calico sample bags. • Field duplicates were collected directly from the splitter as drilling proceeded through a secondary sample chute. These duplicates were designed for lab checks as well as lab umpire analysis. • A sample size of 2-4kg was collected and considered appropriate and representative for the grain size and style of mineralisation.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and	• Genalysis (Perth) was used for all analysis work carried out on the 1m drill chip samples and the rock chip samples. The laboratory techniques below are for all samples submitted to Genalysis and are considered appropriate for the style of mineralisation defined at the Yangibana REE Project: FP6/MS • Blind field duplicates were collected at a rate of approximately 1 duplicate for every 20 samples that

Criteria	JORC Code explanation	Commentary
	model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	are to be submitted to Genalysis for laboratory analysis. Field duplicates were split directly from the splitter as drilling proceeded at the request of the supervising geologist.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	• At least two company personnel verify all significant intersections. • All geological logging and sampling information is completed firstly on to paper logs before being transferred to Microsoft Excel spreadsheets and subsequently a Microsoft Access database. Physical logs and sampling data are returned to the Hastings head office for scanning and storage. Electronic copies of all information are backed up daily. • No adjustments of assay data are considered necessary.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	• Final drillhole collars completed during 2014 were collected by MHR Surveyors using DGPS utilising a locally established control point. Accuracies of the drillhole collar locations collected by MHR Surveyors is better than 0.1m. Drillhole collar positions from 2015 onwards were collected using a Trimble RTX R1 GNSS receiver, with accuracy of approximately 50cm. • Elevation data was recorded by both MHR Surveyors and the Trimble receiver, but the topographic control for all drillholes is based on the high-resolution DTM undertaken by the Company, with Relative Level (RL) assigned to each borehole based on the DTM using Mapinfo Discover 3D. • Down hole surveys are conducted by the drill contractors using a Reflex electronic single-shot camera with readings for dip and magnetic azimuth nominally taken every 30m down hole, except in holes of less than 30m. The instrument is positioned within a stainless steel drill rod so as not to affect the magnetic azimuth. • Grid system used is MGA 94 (Zone 50)
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	• Substantial areas of the main Bald Hill deposit have been infill drilled at a staggered 50m x 50m pattern, giving an effective 35m x 35 spacing, with some areas infilled to 20m x 20m and 20m x 10m in the recent 2018 drilling programme. In general, and where allowed by the kriging parameters, this allows portions

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	of the deposit to be classified in the Measured category. Areas of 50m x 50m spacing are generally classified as Indicated, while zones with wider spacing or where blocks are extrapolated are generally classified as Inferred category. • Bald Hill South has a small area of Measured category with nominal 25m x 25m spacing area of Indicated category (a mixture of 50m x 50m and 50m x 25m spacing) and an Inferred category area in the south and west with wider spacing • The main part of the Fraser's deposit has some areas of Measured category where there is infill drilling at nominally 25m x 25m, with much of the rest being Indicated category, where spacing is typically 50m x 50m. Down-dip zones of mineralisation with higher variances are supported by a number of deep intersections and have been classified as Inferred category. • Yangibana West and North drill spacing is typically 50m x 50m with some new infill areas in the east. Down dip extension has been limited due to the distribution of drilling relative to the mineralisation wireframes. As a result of this infill drilling, combined with improved variography, some Measured category material has been defined. • At the Yangibana deposit drill spacing is nominally on 50m sections, and the upper part of the resource is generally classified as Indicated category while the lower, extensional areas are Inferred category. • Section spacing at Auer is predominantly 50m with some areas of 25m spacing and others at 100m; down dip spacing is typically 50m. Due to limited bulk density information the closer spaced areas have been assigned an Indicated classification, though the majority of the Auer deposit has only two or three holes per section, resulting in these areas being classified as Inferred category. • A significant amount of infill drilling at Auer North in 2017-2018 has increased confidence in what was previously Inferred material; a reasonably large proportion of Auer North is now in the Indicated category, with drill spacing typically on 25 to 50m sections with the remainder being Inferred, at depth and where section spacing is greater than 50m. • No sample compositing is used in this report, all results detailed are the product of 1m downhole sample intervals.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Most drill holes in the recent programme are vertical (subject to access to the preferred collar position) or collared at -60° or -70° in steeper mineralised areas such as Auer and Auer North.
Sample security	The measures taken to ensure sample security.	• The chain of custody is managed by the project geologist who places calico sample bags in polyweave sacks. Up to 10 calico sample bags are placed in each sack. Each sack is clearly labelled with: • Hastings Technology Metals Ltd • Address of laboratory • Sample range • Samples were delivered by Hastings personnel to the Nexus Logistics base in order to be loaded on the next available truck for delivery to Genalysis The freight provider delivers the samples directly to the laboratory. Detailed records are kept of all samples that are dispatched, including details of chain of custody.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• An audit of sampling has been partially completed. Additional umpire sampling is underway. A new source of standards is being used to cross-check data from existing standards and assayed samples that were acquired in the drilling programs comprising the resource.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• Drilling has been undertaken on numerous tenements within the Yangibana Project. • All Yangibana tenements are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• Ten of the Yangibana prospects were previously drilled to a limited extent by Hurlston Pty Limited in joint venture with Challenger Pty Limited in the late 1980s. Auer and Auer North were first drilled by Hastings in 2016.
Geology	Deposit type, geological setting and style of mineralisation.	• The Yangibana ironstones within the Yangibana Project are part of an extensive REE-mineralised system associated with the Gifford Creek Carbonatite Complex. The lenses have a total strike length of at least 12km. • These ironstone lenses have been explored previously for base metals, manganese, uranium, diamonds and rare earths. • The ironstones are considered by GSWA to be coeval with the numerous carbonatite sills that occur within Hastings tenements, or at least part of the same magmatic/hydrothermal system.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	• Not applicable as no exploration results are being announced

Criteria	JORC Code explanation	Commentary
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Not applicable as no exploration results are being announced
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• Not applicable as no exploration results are being announced
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Appropriate maps and sections are available in the body of this ASX announcement.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Not applicable as no exploration results are being announced

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Geological mapping has continued in the vicinity of the drilling as the programme proceeds.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Numerous targets exist for expansion of the current JORC Mineral Resources within the Yangibana Project, as extensions to defined deposits, new targets identified from the Company's various remote sensing surveys, and conceptual as yet untested targets at depth.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	• Data was provided as a validated Access Database and was digitally imported into Micromine Mining software. Micromine validation routines were run to confirm validity of all data. • Individual drill logs from site have been previously checked with the electronic database on a random basis to check for validity. • Analytical results have all been electronically merged to avoid any transcription errors.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	• The Competent Person for the updated and re-estimated Mineral Resources has not yet visited the project area. The Mineral Resource estimate detailed in the announcement was undertaken as a confirmation of the Mineral Resource estimate used in the DFS and there was insufficient time to carry out a site visit. It is expected that a site visit will be undertaken in due course. Mr Lyn Widenbar who completed the Mineral Resources that were not updated was the Competent Person who visited site from 15-16th December 2016 and reviewed geology, drilling etc.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	• Confidence in the geological interpretation is considered to be high. • Detailed geological logging and surface mapping allows extrapolation of drill intersections between adjacent sections. • Alternative interpretations would result in similar tonnage and grade estimation techniques. • Geological boundaries are determined by the spatial locations of the various mineralised structures. • Continuous ironstone units comprising iron oxides and hydroxides, minor quartz rich zones, and locally carbonate and apatite host the rare earths mineralisation and are the key factors providing continuity of geology and grade. The mineralised zones may be described as visually distinctive anastomosing iron rich veins with excellent strike and down dip continuity.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and	• Bald Hill mineralisation dips shallowly (maximum 30^{o}) but variably to the southwest and ranges from 1m to 10m thick. Maximum depth of the resource is to a vertical depth of 80 metres below surface.

Criteria	JORC Code explanation	Commentary
	depth below surface to the upper and lower limits of the Mineral Resource.	• Fraser's mineralisation dips steeply (70-80º) in the western portion becoming more shallow (to 30º) in the east and ranges from 1m to 6m thick. Maximum depth of the resource is to a vertical depth of 140 metres below surface. • Yangibana West mineralisation dips shallowly (maximum 30º) but variably to the south and ranges from 1m to 5m thick. Maximum depth of the resource is to a vertical depth of 100 metres below surface. • Auer has three discontinuous, steeply dipping zones of mineralisation extending North-South over a total strike length of approximately 3.5 km and to a depth of 150m below surface, and a fourth zone that strikes north-easterly. • Auer North comprises three steeply dipping zones over a combined strike length of 700m and has been tested to 120m below surface at the better mineralized Zone 1. • Yangibana North mineralisation dips shallowly (maximum 30º) but variably to the south and ranges from 1m to 5m thick. Maximum depth of the resource is to a vertical depth of 140 metres below surface.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	• As the Mineral Resource estimate was initiated as a check on the previous ordinary kriged (OK) estimate a different technique was employed. In the instance a Multi-Indicator Kriging (MIK) techniques were used in order to derive an estimate that more closely honoured the underlying sample populations. • The MIK parameters used were a primary block size of 10m x 10m x 5m and an escalating search starting at 25m and increasing to 100m radius. Search directions were orientated to align with the main directions within the mineralised wireframes. • Data analysis was conducted in order to derive element correlations to enable a reduction in the number of variogrammes required within the estimation process. Elements with correlations >0.9 were grouped together, in the majority of instances this resulted in 2-3 groups with an additional 2-3 elements which were not well correlated. • In general, variography was performed on TREO_% or Nd2O3+ Pr6O11_%, HREO_ppm, Yb2O3_ppm, ThO2_ppm and U3O8_ppm dependent on the deposit in question. Additional elements

Criteria	JORC Code explanation	Commentary
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Er2O3_ppm, Lu2O3_ppm, Tm2O3_ppm and Y2O3_ppm were also included as required. • Given the need to combine all of the estimates together the e-Type estimate was selected from within the results and values were reported as block average grade within the mineralised wireframe. • Whilst selective mining units were defined within the MIK modelling process, the use of the e-Type estimate does not imply that these were used to define the final estimated outcome. • Estimation has been carried out for the following variables : CeO2_ppm, Dy2O3_ppm, Er2O3_ppm, Eu2O3_ppm, Gd2O3_ppm, Ho2O3_ppm, La2O3_ppm, Lu2O3_ppm, Nd2O3_ppm, Pr6O11_ppm, Sm2O3_ppm, Tb4O7_ppm, Tm2O3_ppm, Y2O3_ppm, Yb2O3_ppm, ThO2_ppm, U3O8_ppm, LREO_ppm, HREO_ppm,TREO_% and Nd2O3+Pr6O11_% • Drill hole spacing is variable, and the block sizes were chosen to reflect the best compromise between spacing and the necessity to define the geological detail of each deposit. In general, block sizes are 10 m along strike, 10m across strike and 5m vertically. • As the estimate used MIK no capping has been applied. • Block model validation has been carried out by several methods, including: • Drill Hole Plan and Section Review • Model versus Data Statistics by Domain • Easting, Northing and RL swathe plots • All validation methods have produced acceptable results. • As these Mineral Resource estimates were completed as a check on the previous OK estimates and a reasonable correlation exists between the two it can be taken that the previous estimates substantially validate the updated Mineral Resource estimate given that there is no change in the underlying data.

Criteria	JORC Code explanation	Commentary
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	• A nominal downhole cut-off of 0.18% TREO has been used in conjunction with logging of ironstone to define mineralised intersections. This is a departure from the previous estimate and negates the need to add an encompassing dilution skin to the previous OK estimates. For reporting purposes, a 0.2% Nd_2O_3+Pr_6O_{11} cut-off has been applied. For mining studies it is likely that an NSR cut-off will be defined.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Mining is assumed to be by conventional open pit mining methods • It is expected that conventional ore loss and dilution would be applied to the Mineral Resource estimate as a modifying factor during pit optimisation and mine planning work.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Beneficiation and hydrometallurgical testwork has been carried out on samples from the Eastern Belt (comprising Bald Hill, Bald Hill Southeast, Fraser's, Auer and Auer North deposits) and from Yangibana West and Yangibana North with very encouraging results. A bulk sample (12 tonnes) combining RC samples from Hastings' 2015 drilling at Bald Hill, Bald Hill Southeast and Fraser's was prepared as the Eastern Belt Master Composite (EBMC) that represents mineralisation that Hastings believes will be mined over the first 4-5 years of any operation. In 2016, Hastings undertook infill drilling at Bald Hill, Bald Hill Southeast and Fraser's deposits in order to produce a bulk (17 tonnes) sample for pilot plant testing. • Test work to date has shown that the rare earths mineralisation (largely monazite) can be upgraded readily using standard froth flotation techniques and readily available reagents. Tests are ongoing to

Criteria	JORC Code explanation	Commentary
		decrease the apatite, carbonate and iron content of these concentrates as these can affect hydrometallurgical recoveries. A second composite sample from Bald Hill, Bald Hill Southeast and Fraser's has been collected during 2018 and is being utilised for further pilot plant-level testwork.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Environmental studies have been carried out on site with Stage 1 Flora and Fauna surveys and Stage 2 Flora and Fauna surveys completed. No environmental issues have been identified. • Subterranean fauna studies have located both troglofaunal and stygofauna but no unique or endangered species have been encountered.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk density/specific gravity have been measured by the Company on core from Yangibana North, and at independent laboratories on core from Bald Hill, Bald Hill South, Fraser's, Yangibana, Auer, Auer North and Yangibana West. Samples have been taken from each of oxidised, partially oxidised and fresh mineralisation with results feeding into the resource estimations. • Bulk density/specific gravity measurements have also been carried out at an independent laboratory on samples of oxidised, partially oxidised and fresh host rock, granite. • In situ bulk densities for the individual deposits have ranged from 2.30 to 2.80 tonnes per cubic metre and have been assigned into the models based on weathering surfaces and assigned rock types.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative	• The Mineral Resource has been classified in the Measured, Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). A range of criteria has been

Criteria	JORC Code explanation	Commentary
	confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	considered in determining this classification including: • Geological and grade continuity • Data quality. • Drill hole spacing. • Modelling technique and kriging output parameters. • The Competent Person is in agreement with this classification of the resource.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	• A review of both the updated and previous Mineral Resource estimates has been completed as part of the DFS financing process and the updated Mineral Resource estimate incorporates feedback from the review.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The relative accuracy of the various resource estimates is reflected in the JORC resource categories. • At the Measured and Indicated Resource classification level, the resources represent local estimates that can be used for further mining studies. • Inferred Resources are considered global in nature.